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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,953	06/27/2003	Yasushi Yamamoto	358.41107VX1	6324

21254 7590 07/20/2004

MCGINN & GIBB, PLLC
8321 OLD COURTHOUSE ROAD
SUITE 200
VIENNA, VA 22182-3817

EXAMINER

KRAMER, DEVON C

ART UNIT	PAPER NUMBER
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3683

DATE MAILED: 07/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/606,953

Applicant(s)

YAMAMOTO, YASUSHI

Examiner

Devon C Kramer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/5/04 and 6/27/03</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Objections

- 1) Claim 1 is objected to because of the following informalities:

Line 8, "the directions" should be --directions--;

Line 19, "the opposing surfaces" should be --opposing surfaces--;

Line 24, "the synchronizing position" should be --a synchronizing position--.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

- 2) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- 3) Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Loeffler (DE 19842532) in view of Clark (US RE. 32783).

Loeffler provides a shift actuator for a transmission, which actuates in a direction of a shift, a shift lever (16) for operating a synchronizing device of the transmission, the shift actuator comprising: a first electromagnetic solenoid (48) and a second electromagnetic solenoid (48) for actuating an operation member (18) coupled to the shift lever in directions opposite to each other; each of the first and second electromagnetic solenoid comprising a casing (24, 26), a fixed core (near 46) disposed in the casing, a moving core (44) arranged to be allowed to approach, and separate away from the fixed core, an operation rod (18) mounted on the moving core to engage

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with the operation member, and an electromagnetic coil (46) arranged between the casing and the fixed core as well as the moving core, wherein the edge of the moving core and an edge of the fixed core, when closest to each other, corresponds to a synchronizing position. Loeffler is silent to the specific teaching of iron for the moving core and the fixed core. Loeffler lacks the teaching of protuberances.

The examiner takes official notice that devices using motion initiated by a coil or magnet use iron because a durable, magnetic material is needed to ensure proper operation of the device.

Clark teaches a solenoid device with a fixed core (50) and a moving core (45) wherein a stepped protuberance (42) is formed on one of the opposing surfaces of the fixed iron core and of the moving iron core, a stepped recess (56) is formed in the other surface to correspond to the stepped protuberance; and a position at which an edge of the protuberance and an edge of the recess become closest to each other is so constituted as to correspond to a synchronizing position of the synchronizing device.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have provided the solenoid of Loeffler with the protuberance and recess as taught by Clark to minimize concentricity between the moving core and fixed core thus reducing magnetic side loading.

Conclusion

4) The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nippert, Bjorknas et al, Suzuki, Ichihashi et al, and MacInnis all

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provide solenoid devices with similar features to the instant application. Yamamoto et al is the parent to the instant application.

5) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Devon C Kramer whose telephone number is 703-305-0839. The examiner can normally be reached on Mon-Fri 8-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Lavinder can be reached on 703-308-3421. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DK


7/15/04